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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,649	08/07/2003	Jin Wook Cho	MTKP0017USA	1648

27765 7590 11/13/2003

NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE)  
P.O. BOX 506  
MERRIFIELD, VA 22116

EXAMINER
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CHOE, HENRY

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/604,649	CHO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Henry K Choe	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6-9, 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by kurlyama (Fig. 11).

Regarding claims 1 and 8, kurlyama (Fig. 11) discloses an amplifier circuit comprising a plurality of transistors (Q1-Q2), a plurality of ballast resistors (Rcs) which corresponds to the plurality of transistors (Q1-Q2) and wherein each ballast resistor having a first terminal (upper terminal of Rc) and a second terminal (lower terminal of Rc) and the first terminal (upper terminal of Rc) being connected to the base of the corresponding transistor, a DC node (a node between the bias circuit and resistor Rc) which is connected to the second terminals (lower terminals of the Rcs) of the plurality of ballast resistors (Rcs), an RF node (Pin), and a capacitor (Ci) having a third terminal (left terminal of Ci) and a fourth terminal (right terminal of Ci) and wherein the third terminal (left terminal of Ci) is connected to the RF node (Pin) and the fourth terminal (right terminal of Ci) is connected to the plurality of bases.

Regarding claims 2 and 9, the transistors (Q1-Q2) in Fig. 11 of kurlyama are functionally equivalent to the heterojunction bipolar transistors.

Regarding claim 3, the capacitance value for the capacitor (Ci) in Fig. 11 of kurlyama is substantially high.

Regarding claims 6 and 7, the limitations recited in the claims are intended use of the invention.

Regarding claim 12, kurlyama (Fig. 11) further includes additional pluralities of transistors (Q3-Q4) and ballast resistors (Rcs) and corresponding capacitors (Cis) and wherein sets of an equal number of the transistors (Q1-Q4) and ballast resistors (4 Rcs), and a capacitor (top Ci) form a power amplifier integrated circuit.

Regarding claim 13, wherein each set includes four transistors (Q1-Q4), four ballast resistors (4 Rcs) and one capacitor (top Ci).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over kurlyama (Fig. 11).


Regarding claims 4, 10 and 11, kurlyama (Fig. 11) discloses all the limitations in the claim except for that the capacitor having two regions of metallization in two different

layers of a semiconductor. It would have been obvious to have fabricated the capacitor with two regions of metallization in two different layers of a semiconductor since forming the capacitor with the particular materials are well known in the art as obvious design choice.

Regarding claim 5, kurlyama (Fig. 11) discloses all the limitations in the claim except for that the ballast resistors are set to maximize uniformity of temperature of a plurality of emitters of the transistors. It would have been obvious to have implemented the ballast resistors to specific values of the resistors, since they are based on the routine experimentation to obtain the optimum operating parameters.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (703) 305-0576.

  
**HENRY CHOE**  
**PRIMARY EXAMINER**

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